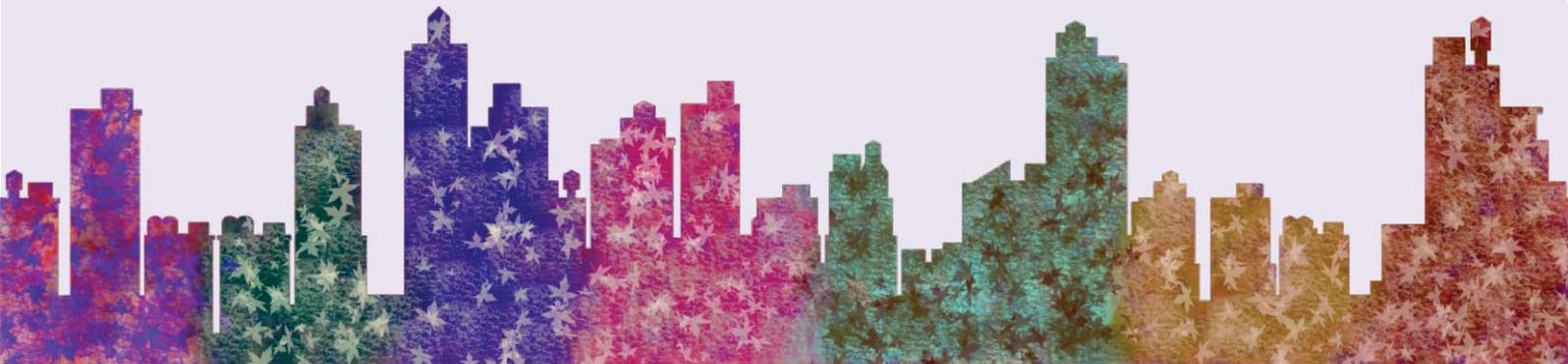


Vol - 13 No. 11 November, 2018

RCUES, Mumbai
Enabling better cities...



Urban Environ Vision

An information bulletin



RCUES
Mumbai

Regional Centre for Urban & Environmental Studies
All India Institute of Local Self-Government, Mumbai

Established in the year 1968, is fully supported by Ministry of Housing and Urban Affairs, Government of India.

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Mr. Ranjit Chavan

Director General, AILSG, &
Editor in-Chief
Mr. Rajiv Agarwal, IAS (Retd.)

Director, RCUES, AILSG, &
Editor
Ms. Utkarsha Kavadi



Urban Environ Vision aims to take its readers through the journey of RCUES, Mumbai while providing encouragement and inspiration. It offers a platform to display the efforts undertaken by RCUES, Mumbai and showcases its achievements.

Regional Specialized Training Programme on 'Solid Waste Management with a focus on Dry Waste Processing'

14th November, 2018, Guwahati, Assam.

The key highlight of this training programme was the session on Swachh Survekshan 2019 where the participants were given an overview of the components.

Background

The dream of clean India, visualized by Mahatma Gandhi is gradually taking place since the launch of Swachh Bharat Mission (SBM) on 2nd October 2014. In revised Rules of Solid Waste Management (SWM) - 2016, the focus is being given on segregation of solid waste.

SWM Rules - 2016 is mandatory for all municipal bodies to effectively manage urban solid waste in the city. It is mandatory for waste generators to store segregated waste at source and municipal bodies to collect such a waste in a segregated manner directly from the households and transport it to the designated places for appropriate treatment and processing. Major focus of SWM Rule is on segregation at source and to achieve maximum processing of wet and dry waste.

It is essential for municipal bodies to adopt more systematic approach towards planning and management for solid waste and develop capacities of their staff / officials towards effective and efficient solid waste management system. Given the launch of Swachh Bharat Mission, Indian cities have realized the importance of waste processing and most of them are engaged in wet waste processing through composting. However, it is now essential to look into the processing of dry waste.

In view of the above background, Regional Centre for Urban & Environmental Studies (RCUES) of All India Institute of Local Self-Government (AIILSG), Mumbai had organized a Regional Specialised Training Programme on 'Solid Waste Management with a focus on Dry Waste Processing' on

14th November, 2018 at Guwahati, Assam. This programme was supported by Ministry of Housing & Urban Affairs (MoHUA), Government of India (GoI).

Key Objective

The key objective of the programme was to discuss various methods and solutions to improve SWM at city level, with a focus on dry waste processing and support Urban Local Bodies (ULBs) in achieving their targets under SBM.

Participation

23 participants comprising Assistant Engineers, Junior Engineers, and City Project Officers from various ULBs of Assam attended this training programme.



Participants at the programme in Guwahati, Assam.

Experts to Speak

The programme started with the first session which was delivered by Mr. Ranjit Kalita, Nodal Officer for Swachh Bharat Mission - Urban (SBM-U), Assam who gave the 'Overview of Solid Waste Management in Assam'. He further highlighted the importance of Information Education and Communication activities to aid implementation of Solid Waste Management. He explained in depth the entire solid waste management value chain involving segregated collection, transportation, processing and treatment and finally disposal. He also talked about the importance of efficient planning through identification of key issues specific to every city for prioritization followed by choosing appropriate technology, knowing the policy framework for proper implementation and learning from good practices.

He further talked about the 'SWM Rules - 2016' which specifically outlines the role of waste generators and the local authorities. He further talked about implementation of collection of segregated waste from households which is one of the most important precedent for treatment and processing of waste.



Mr. Ranjit Kalita, Nodal Officer for SBM-U, Assam addressing the participants.

The next session was delivered by Dr. Pradip Baishya, Assistant Professor, Assam Engineering College, Guwahati, Assam, who talked about the 'Importance of Plastic Waste Management and Methods of Achieving Plastic Ban in Cities'. He highlighted the disadvantages and challenges

associated with using single-use plastics. Further, he outlined strategies to overcome the use of such plastics. Some of the strategies include use of substitutes or locally produced materials which are economically viable. He further explained the importance of biodegradable plastic. Towards the end, he concluded by sharing a step by step process through which plastic ban may be implemented in cities. It includes developing a waste strategy by taking inputs from relevant stakeholders like the ULB, citizens, NGOs, organizations involved with making products out of locally available materials etc., outlining the roles of each department to ensure systematic implementation and detailed action plans to be put in place to set periodic targets for achieving plastic ban.



Dr. Pradip Baishya, Assistant Professor, Assam Engineering College, Guwahati, Assam addressing the participants.

The next session was delivered by Ms. Anindita Saikia, Research Associate, RCUES of AILSG, Mumbai on 'Understanding Swachh Survekshan 2019 (SS19)'. She began the session with the overview of changes in the indicators from Swachh Survekshan 2018 to 2019 and the status of Guwahati's performance in SS18. Further, she spoke about the systematic data uploading that was to be done on the MIS portal on a monthly basis for recording the progress of the city under SS19. She discussed each indicator under the 7 components of Collection and

Transport, Processing, Sustainable Sanitation, Capacity Building, Information Education Communication (IEC), Byelaws and Regulations and Innovations. She informed the participants about the Swachh Manch which was being used to keep track of IEC activities undertaken by the ULB. Further, she explained the marking system under Independent Validation and discussed about the two new components under Certification which include the Star Rating Protocol and Open Defecation Free (ODF) Protocol. She concluded the session by talking about the importance of updating the City Profile and downloading the Swachhata App under SS19.



Ms. Anindita Saikia, Research Associate, RCUES of AILS, Mumbai addressing the participants.

Summing-up

At the end of the training programme, feedback was taken from the participants. Certificates were distributed to the participants and the training programme was concluded by giving a vote of thanks to the participants by Ms. Anindita Saikia.

Regional Specialized Training Programme on 'Solid Waste Management with a focus on Treatment of Wet Waste'

15th & 16th November, 2018, Ajmer, Rajasthan.

The key highlight of this training programme was the group exercise followed by technical sessions to acquaint participants about integrated approach for effective waste management with a focus on 100% segregation and various technologies for wet waste management and their application at city level.

Background

The Swachh Bharat Mission (SBM) launched in October 2019 by the Ministry of Housing & Urban Affairs (MoHUA) Government of India (GoI) as a mass movement with the vision to achieve Clean India by October, 2019. The SBM are designed to address the challenges of sanitation and creating a secure solid waste management system.

Municipal Solid Waste Management (MSWM) is an important component of this mission and the most essential service for maintaining the quality of life of people in the urban areas for ensuring better standard of health, sanitation and environment. According to Central Pollution Control Board, 1,44,165 TPD of MSW was generated in India during 2013-14. Of the total waste generated, approximately 1,15,742 TPD (80%) of MSW was collected and only 32,871 TPD (22.8%) was treated. It is also estimated that the increase in waste quantities will be 5 percent per annum & urban India will generate 276 TPD by 20,21,450 TPD by 2031 and 11.95 TPD of MSW by 2050. The increasing scale of generation would have its own complexities in terms of appropriate management.

SWM Rules - 2016 is mandatory for all municipal bodies to effectively manage urban solid waste in the city which enumerates that landfills should be used for residual waste including non-usable, non-recyclable, non-biodegradable, non-combustible and non-reactive waste. This is an important departure from previous policies emphasizing the need for sanitary landfills. Adoption of three 'R's for achieving desired objective of zero waste to landfill is a core part of the SWM Rules - 2016 directing towards clean city as envisaged in SBM.

To strengthen capacities of urban local bodies (ULBs) in achieving SWM related goals by encouraging their participation at all level is necessary for effective and efficient implementation through orientation on innovative ideas related to SWM by visionary project development in holistic approach and imparting practical knowledge on various technologies of segregation and disposal.

Against this background, Regional Centre for Urban & Environmental Studies (RCUES) of All India Institute of Local Self-Government (AIIILSG), Mumbai had organized a Regional Specialised Training Programme on 'Solid Waste Management with a focus on Treatment of Wet Waste' on 15th & 16th November, 2018 at Ajmer, Rajasthan. The training programme was supported by MoHUA, GoI.

Key Objective

The key objective of the programme was to discuss various methods and solutions to improve SWM at city level, with a focus on treatment of wet waste and support ULBs in achieving their targets under SBM.

Participation

20 participants comprising Municipal Presidents, Chairpersons of Health and Sanitation Committee, Elected Representatives, Engineers from SWM Dept., Sanitary Inspectors, NGO representatives from different ULBs of Gujarat and Maharashtra attended this training programme.



Participants during the programme at Ajmer, Rajasthan.

Inauguration

The training programme commenced with an introduction by Mrs. Maleka Ansari, Sr. Research Officer, RCUES of AIILSG, Mumbai. She explained the objectives and outline of the training programme. She also briefed about the activities undertaken by RCUES of AIILSG, Mumbai in training and research areas.

The training programme was inaugurated by Mr. Usman Bhai Nai, President, Ranavav Municipality, Gujarat by lighting the traditional lamp in presence of Mr. Sanjay Shinde & Mr. Ganesh Shetey, Chief Officer, Khopoli & Washim Municipal Council, Maharashtra respectively. In his inaugural address, he discussed the importance of source segregation and treatment of wet waste.



Mr. Usman Bhai Nai, President, Ranavav Municipality, Gujarat inaugurating the programme..

Experts to Speak

The first session was addressed by Mr. Ramesh Yadawar, Senior Programme Officer, Participatory Research in Asia (PRIA), Ajmer, on 'Overview of Solid Waste Management & Swachh Bharat Mission (SBM)' and 'Status of SWM with a focus on Segregation and Treatment of Wet Waste in Rajasthan'. He initiated the session with an overview on SBM by revising provisions and rules of implementation introduced by Government of India. He elaborated upon waste management by highlighting status of waste generation, segregation and processing in different cities in Rajasthan state. He informed that most of the cities of the state have achieved door to door collection of waste but efforts are necessary to increase rate on segregated collection and transportation of solid waste from residential areas, market places, bulk generation spots, slaughter houses etc. He also highlighted the alarming facts about open dumping of solid waste and absence of its processing in many cities leading to health and environmental impacts. Based on his work experience working with communities, he stressed on the following factors which ensure safe disposal of segregated waste: awareness generation, human resource management, adequate financial support and site selection with adoption of appropriate technologies for processing of solid waste.

Further Mr. Yadawar talked about treatment of wet waste through aerobic composting initiated by Ajmer Municipal Corporation at decentralised level with the help of local NGOs and participation from the community.



Mr. Ramesh Yadawar, Senior Programme Officer, PRIA, Ajmer addressing the participants.

Further he extended his discussion on ‘Role of Ragpickers and their Value Addition in Segregation Process’. He discussed issues and challenges of ragpickers by highlighting their invisible role including their vulnerable, impoverished and underprivileged survival. He briefly discussed about their valuable contribution in segregation process of waste management. He also pointed to SWM Rules - 2016 which recognised their integration and identification by making provisions to improve working conditions, livelihood and health care system. He also shared the significant work of Self Employed Women’s Association (SEWA) in Ahmedabad and SWACH in Pune, highlighted success story of their integration and up-gradation of life pattern.

Mr. Rahul Rathi, Senior Project Officer, ICLEI, South Asia spoke on ‘SWM Rules - 2016 and Legal Framework for SWM with a Focus on Segregation of Solid Waste’. He elaborated upon SWM Rules - 2016 with a focus on segregation, emphasizing on SWM Rules - 2016 to address the entire value chain of SWM including segregation, collection, transportation, treatment, disposal and reuse of solid waste. He pointed that the awareness about source segregation plays an important role in MSWM and augments the efficiency of waste management stream. He also cited that community participation is key factor to sustain segregation process in waste management system.



Mr. Rahul Rathi, Senior Project Officer, ICLEI, South Asia addressing the participants.

In the next session, Mr. Rathi talked about ‘Segregation and Recycling Technologies’. He mentioned that keeping cities clean by disposal of waste at landfill sites is not a sufficient as part of the integrated approach of waste management. The process of segregation, treatment, recycling and reuse of the waste and zero garbage should be the goal of waste managers for achievement of effective solid waste management. He advocated for the installation of decentralized composting plants to reduce the load on landfill site.

He briefly focussed on waste management issues and tried to explain affordable, eco-friendly, and sustainable waste treatment/recycling solutions.

Mr. Mahesh Pandya, Director, Paryavaran Mitra, Ahmedabad discussed on ‘Methods of Achieving Plastic Ban in Cities’. He briefed about the different types of plastic handled every day which people use conveniently and easily throw into dustbin without considering the ill-effects on environment. He shared the estimates which stated that about one trillion plastic bags are consumed worldwide. The World Economic Forum study on plastic pollution depicts if plastic pollution continues to rise then oceans will have more plastics than fish by 2050. Further he also informed that India’s contribution to plastic waste that is dumped into the world’s oceans every year is a massive 60%.



Mr. Mahesh Pandya, Director, Paryavaran Mitra, Ahmedabad addressing the participants.

He shared remedial measures that should be adopted by the cities for tackling the global plastic pollution including legal provisions and its effective implementation, regular organisation of awareness programmes about the risks and hazards of plastic, making efforts for behaviour change by consumers, 100% achievement on segregation process and recycling of waste by adopting suitable technologies, and effective partnerships between corporate and other stakeholders are needed to meet the challenge.

Mr. Uday Bhawalkar, Director, Bhawalkar Ecological Research Institute, Pune discussed on 'Speedy Stabilization of Urban Wastes with Zero Pollution of Water and Air'. He stated that effective treatment is necessary for total utilization of wasted raw materials towards converting wastes into resources. He spoke on bio-sanitizer ecochip technology that uses nature-inspired processes which converts environment pollution free. He elaborated that man-made technologies often produced sludge, reject streams, heat and greenhouse gases. Zero pollution discharge insists on no use of electricity and chemicals, also avoids air and landfill pollution. Further he drew the attention of the participants on its applications in borewell water treatment, greywater treatment, wastewater treatment, garbage stabilization, air healing, remediation of odour-pathogens-pests, auto-growth of useful plants, and reduction of weeds. In conclusion, he noted learning from nature is essential and the bio sanitizer technology is based on many such lessons from nature.



Mr. Uday Bhawalkar, Director, Bhawalkar Ecological Research Institute, Pune addressing the participants.

In the presentation by the ULBs, Mr. Sanjay Shinde, Chief Officer, Khopoli Municipal Council, Maharashtra presented case study on 'Achieving 100% Segregation at HH Level'. He briefed about the work completed under cleanliness drive for waste management and healthy sanitation. He discussed previous status of the city by highlighting problems and constraints faced by them to make the city clean. He said that with the help of communities' support, NGOs and other stakeholders, they achieved 100% segregation at household level, and 70% at city level.



Mr. Sanjay Shinde, Chief Officer, Khopoli Municipal Council, Maharashtra addressing the participants.

Group Exercise



Participants doing group exercise during the programme at Ajmer.

The group exercise was conducted to make action plans by cities for effective solid waste management by adopting suitable technologies for wet and dry waste processing. Four groups were formed comprising representatives from different ULBs. Each group was allotted the task of preparing 10 key actions and a plan for implementation at local level for achievement of effective waste management. Participants discussed among the group and prepared plan of action based on the existing status of SWM in their respective cities. Thereafter, each group presented the solutions applicable to their cities for achievement of best



Presentation of group exercise by participants.

Important points were noted by the panel during group presentation. Group presentations focused on:

- Adoption of integrated approach for implementation of solid waste management.
- Efforts for achievement of 100% segregation through developing good habits among the city dwellers with the help of municipal officials and media
- Organizing training camps for convincing importance of segregation at zone level by involving, local leaders, active women groups, youth association, NGOs and celebrities.
- Implementation of 100% plastic ban with help of school and college students.
- Alternatives of cloth bag in place of plastic bag.
- Encouraging women group for providing cloth bags at reasonable rate.
- Establishment of sorting centers especially for dry waste.
- Adoption of viable technologies for dry waste processing.
- Wet waste disposal by applying possible solutions, aerobic or vermin-composting at society or zone level.

- Identification of markets for wet waste compost by encouraging farmers.
- Provision to start dry waste sorting centre and its supply to recycling industries.

At the end of the session, solutions worked out by the groups were assessed by Mr. Ramesh Yadawar and he felicitated the group that prepared best action plan.



Participants awarded for best group exercise and presentation.

Summing-up

At the end of second day, feedback was taken from the participants on the training programme. Certificates were distributed to the participants. The training programme was concluded by Mrs. Maleka Ansari who proposed a vote of thanks to resource persons and participants.



Mrs. Maleka Ansari, Sr. Research Officer, RCUES of AILSG, Mumbai proposed a vote of thanks.

Regional Specialized Training Programme on 'Solid Waste Management with a focus on Segregation, Collection & Transportation'

16th & 17th November, 2018, Agartala, Tripura.

The key highlight of this training programme was the group work to find innovative solutions of solid waste management in segregation, collection and transportation to assess the innovative ideas of the participants.

Background

Due to urbanization and economic development consumption rates are increasing day by day which consequently leads to the generation of bulk volume of solid waste in urban areas. It is a significant challenge to deal with this uncontrolled generation of solid waste and its proper management. Accumulated solid waste spreads dirtiness and environmental nuisances including odors, flies, and blowing litter that directly causes an aesthetic problem. In context of long term effects, solid waste can also contaminate the environment by solid waste disposal that transfers harmful substances to the air, water and soil, which may destroy the environment and pose human health and safety problems. Besides that, solid waste also poses a negative impact on economics and resources from the cost of disposal. Disposal of all collected solid waste on landfill site is not a correct option because in future land will be less as compare to fast increasing garbage. Hence, due to acceptance of these most severe truths, Solid Waste Management (SWM) has received much attention.

For ensuring hygiene, waste management and sanitation across the nation, Swachh Bharat Mission (SBM) was launched on 2nd October, 2014 and is being implemented by the Ministry of Housing & Urban Affairs (MoHUA), Government of India (GoI) in urban areas.

Introduction of SWM Rules - 2016 is also mandatory for all municipal bodies to effectively manage urban solid waste in cities. It is responsibility of waste generators to store segregated waste at source and municipal bodies to collect

such a waste in a segregated manner directly from the household and transport it to the designated places for appropriate treatment and processing. Major focus of SWM Rule is segregation at source and collection and transportation of waste in segregated manner.

The role of urban local bodies (ULBs) and their participation in the effective management process of solid waste are important. Against this background, Regional Centre for Urban & Environmental Studies (RCUES) of All India Institute of Local Self Government (AILSG), Mumbai had organized a Regional Specialized Training Programme on 'Solid Waste Management with a focus on Segregation, Collection & Transportation' on 16th & 17th November, 2018 at Agartala, Tripura. This training programme was supported by the MoHUA, GoI.

Key Objective

The key objective of the programme was to discuss various methods and solutions to improve SWM at city level, with a focus on segregation, collection and transportation and support ULBs in achieving their targets under SBM.

Participation

37 participants comprising Junior Engineers, Town Supervisor, Special Officer (SWM) and Sanitary Inspectors of ULBs of Tripura attended this training programme.



Participants during the programme at Agartala, Tripura.

Introduction

This training programme commenced with an introduction by Ms. Anindita Saikia, Research Associate, RCUES of AIILSG, Mumbai. She welcomed participants and explained the objective of the training programme to focus on SWM value chain at the city level and support ULBs in achieving mission objectives as SWM is one of the significant components of SBM.

Experts to Speak

The first session was addressed by Ms. Amruta Paranjape, Research Associate, RCUES of AIILSG, Mumbai on 'Overview of Solid Waste Management' and 'Solid Waste Management Rules - 2016'. She exhibited Indian scenario in Solid Waste Management (SWM), depicting the figures on waste generation and processing in different states in India. She further explained the objectives of Swachh Bharat Mission, focusing primarily on 'Modern and Scientific Municipal Solid Waste Management'. She deliberated that, though urban waste is a complex process, it needs to be solved by understanding the solid waste management value chain for efficient planning, identifying the key issues specific to particular city for prioritization, choosing appropriate technology, knowing the policy framework for proper implementation and learning from good practices. She further elaborated on value chain from segregation, collection to disposal of solid waste by citing various examples. She concluded the session by sharing a policy framework in India by stating the SWM Rules - 2016.



Ms. Amruta Paranjape, Research Associate, RCUES of AIILSG, Mumbai addressing the participants.

The next session was taken up by Dr. Pradip Baishya, Assistant Professor, Assam Engineering College, Guwahati, Assam on 'Importance of Segregation and Methods to Achieve Segregation and SWM Technologies with a Focus on Composting'. He explained the importance of waste segregation for the purpose of processing. He also stressed about the importance of Information Education and Communication (IEC) for effective implementation of segregation on ground. Further, he talked in detail about composting carried at various levels- household, community or city or a combination of all. He explained the factors influencing the process of composting which include- micro-organisms, aeration, carbon: nitrogen ratio, temperature, moisture, PH and particle size. He talked about two types of composting- three pot system and rotary drum composting. Finally, he concluded that if wet waste treatment is carried out successfully in the cities, a huge amount of waste can be diverted from going to the landfill.



Dr. Pradip Baishya, Assistant Professor, Assam Engineering College, Guwahati, Assam addressing the participants.

The next session was delivered by Ms. Anindita Saikia, Research Associate, RCUES of AILSG, Mumbai on 'Understanding Swachh Survekshan 2019 (SS19)'. The session started with the overview of changes from Swachh Survekshan 2018 to 2019 and the status of Agartala in previous Survekshan 2018. Further, she explained the importance of the MIS portal specific to monthly data uploading for SS19. She discussed each indicator under the 7 components of Collection and Transport, Processing, Sustainable Sanitation, Capacity Building, Information Education Communication (IEC), Byelaws and Regulations and Innovations. She also talked about the Swachh Manch used to keep track of IEC activities undertaken by the ULB. Further, she explained the marking system under Independent Validation and discussed about the two new components under Certification which include the Star Rating Protocol and Open Defecation Free (ODF) Protocol. She concluded the session by talking about the importance of City Profile and Swachhata App under SS19.



Ms. Anindita Saikia, Research Associate, RCUES of AILSG, Mumbai addressing the participants.

Group Exercise

A group exercise was taken on 'Issues and Challenges of Segregation and Possible Solutions for Effective Implementation'. Participants were divided city wise into groups of six. Participants discussed the common issues and challenges faced by them in order to implement segregation. Some of the issues include - lack of public awareness, lack of required infrastructure and manpower, shortage of ULB staff, financial constraints etc.



Participants doing group exercise during the programme at Agartala, Tripura.

Each group presented their strategies to achieve segregation in their cities and overcome the issues and challenges. Later, Ms. Anindita Saikia concluded the activity by announcing the winning group which presented the most practical and effective strategies to achieve segregation on ground.



Presentation of group exercise by participants.

Summing-up

The feedback was taken from the participants and the certificates were distributed to the participants and the training programme was concluded by Ms. Anindita Saikia by giving a vote of thanks to the participants and faculties.

Regional Specialized Training Programme on 'Solid Waste Management with a focus on Treatment of Wet Waste'

28th & 29th November, 2018, Jamnagar, Gujarat.

The key highlight of this training programme was the exposure visit to the bio methanation plant to exhibit good practices of generating waste to energy.

Background

The Swachh Bharat Mission (SBM) was launched in October 2014 by the Ministry of Housing and Urban Affairs (MoHUA), Government of India (GoI) as a mass movement with the vision to achieve clean India by October, 2019. Cities can take up challenges to manage solid waste under SBM. Municipal Solid Waste Management (MSWM) is an important component of the said mission.

SWM Rules - 2016 is a mandatory to follow for all urban local bodies (ULBs) to effectively manage the urban solid waste in the city which enumerates that, landfills should be used for residual waste including non-usable, non-recyclable, non-biodegradable waste.

Against this background, Regional Centre for Urban & Environmental Studies (RCUES) of All India Institute of Local Self Government (AIILSG), Mumbai had organized a training programme on 28th & 29th November, 2018 at Jamnagar, Gujarat. This training programme was supported by the MoHUA, GoI.

Key Objective

The key objective of the programme was to discuss various methods and solutions to improve SWM at city level, with a focus on treatment of wet waste and support ULBs in achieving their targets under SBM.

Participation

63 participants comprising Hon'ble Mayor, Municipal Commissioner, Executive Engineer, Zonal Officer and Sanitary Inspectors from different ULBs of Gujarat attended this training programme.



Participants during the programme at Jamnagar, Gujarat.

Inauguration

This training programme commenced with an introduction by Mr. Kalyan Kelkar, Advisor, AIILSG, Mumbai. He welcomed the dignitaries on the dais and explained the objective of the training programme. The programme was inaugurated by Mr. Hasmukhbhai Jethva, Hon'ble Mayor, Jamnagar Municipal Corporation, Gujarat. In his inaugural speech, he emphasized the issues of solid waste in the city, which needs to be addressed to keep the city clean. He wished a great success to the training programme.

Mr. R. B. Barad, IAS, Municipal Commissioner, Jamnagar Municipal Corporation addressed the participants by sharing the initiatives taken by Jamnagar Municipal Corporation under Swachh Bharat Mission (SBM).



Inauguration of the training programme at Jamnagar, Gujarat.

Experts to Speak

The first session was delivered by Mr. C. N. Ray, Professor, Centre for Environmental Planning and Technology (CEPT) University, Ahmedabad, on 'Overview of Solid Waste Management'. He discussed the Indian scenario in Solid Waste Management, sharing statistics on waste generation in different states in India. He further explained the objectives of Swachh Bharat Mission, focusing primarily on 'Modern and Scientific Municipal Solid Waste Management'. He deliberated that though urban waste is a complex process, it needs to be solved by understanding the solid waste management value chain for efficient planning. Identify the key issues specific to your city for prioritization, choose appropriate technologies, know the policy framework for proper implementation and learning from good practices. He then elaborated on the value chain from segregation, collection to disposal of solid waste management by citing various examples. He concluded the session by sharing a policy framework in India by stating the rules and guidelines of Solid Waste Management (SWM) Rules - 2016. He explained SWM Rules 2016 and duties of stakeholders for its effective implementation. He also explained the comparative

overview of SWM Rules - 2000 and 2016 in terms of applicability, categories of waste segregation, responsibilities of waste generators, user free and spot fine, rag pickers, land allocation for SWM facilities etc.



Mr. C. N. Ray, Professor, CEPT University, Ahmedabad addressing the participants.

He continued with next session on 'Methods for Segregation of Waste and Treatment of Wet Waste with Focus on Composting'. In the beginning, he shared a presentation on types of waste and time required to degenerate these wastes. While explaining the waste pyramid, he emphasized on segregation and composting. He noted that a World Bank study reported that low-income countries have the highest proportion of organic waste. He further talked about the benefits of organic waste recovery. Lastly, he explained in detail several waste composting technologies viz aerobic processes, anaerobic processes composting and its types etc. He concluded by describing benefits of composting.

He delivered the next session on 'Swachh Survekshan 2019'. He explained the overall changes from Swachh Survekshan 2018 to 2019. He further explained the indicators that will be used to assess the cities. He discussed with the participants their strategies for Swachh Survekshan 2019 based on which he gave them the priority action points to help them prepare better for the assessment.

On the second day, Mr. Manoj Rathod, Junior Engineer, Jamnagar Municipal Corporation, Gujarat delivered the session on 'Initiatives on SWM by Jamnagar Municipal

Corporation'. He explained the efforts taken by Jamnagar Municipal Corporation in Solid Waste Management. The major activity encouraged is segregation of waste and door to door waste collection at city level. The process of segregation was shared with the people at city level. Currently, more than 80 percent people do segregation on daily basis.



Mr. Manoj Rathod, Junior Engineer, Jamnagar Municipal Corporation addressing the participants.

Group Exercise

A group exercise was conducted on Swachh Survekshan. The participants were divided into six groups. The groups were asked to prepare an action plan to achieve the highest rank in Swachh Survekshan for their cities. Each group discussed amongst themselves to develop and prepare an action plan for their cities. The best performing group was awarded by a token of appreciation.



Participants doing group exercise during the programme at Jamnagar, Gujarat.

Site Visit

The site visit was conducted to Bio Methanation Plant at Dared, Jamnagar. This plant was being operated to convert biodegradable solid waste of the city into rich bio gas. The bio gas generated can be used directly for cooking and generation of electricity. This was exhibited as a good practice to generate energy out of city waste.

Summing-up

At the end of the training programme, the feedback was taken from the participants and the certificates were distributed to them. Mr. Kalyan Kelkar, Advisor, AIILSG, Mumbai concluded the programme by proposing the vote of thanks to the participants and the resource persons.

Glimpses of the Site Visit



Integrated Capacity Building Programme (ICBP) All India Institute of Local Self-Government (AIILSG), Mumbai.

Background

Ministry of Housing and Urban Affairs (MoHUA), Government of India (GoI) is implementing several flagship urban missions / schemes for the overall development of the urban sector. They include - 1) the Atal Mission for Rejuvenation and Urban Transformation (AMRUT) focusing on water supply and sewerage improvement, 2) Smart City Mission (SCM) aimed at developing smart solutions to improve selected urban areas, 3) Swachh Bharat Mission (SBM) focusing on Open Defecation Free (ODF), waste management and sanitation 4) Heritage City Development and Augmentation Yojana (HRIDAY) to address inclusive development of heritage cities 5) National Urban Livelihood Mission (NULM) to reduce poverty and ensure self-employment through skill development and 6) Pradhan Mantri Awas Yojana (PMAY) to provide permanent shelter to urban poor. Currently these schemes are operating in a standalone manner. There is a scope to develop an integrated approach towards the missions in order to increase the efficiency of implementation.

Recognizing a need for capacity building of technical functionaries and elected representatives involved in the implementation of these, the MoHUA has launched an

Integrated Capacity Building Framework covering all the missions. It is our pleasure to state that All India Institute of Local Self-Government (AIILSG), Mumbai is empanelled to implement Capacity Building Programme under Integrated Capacity Building Programme (ICBP).

AIILSG, Mumbai had organized two ICBP workshops at Mumbai along with the support from Government of Maharashtra in the month of November, 2018.

Key Objective

The key objective of the programme was to sensitize the elected representatives about physical and economic outcomes targeted under AMRUT, Smart Cities Mission, HRIDAY, PMAY (U), NULM and SBM (U) by discussing their related service provisions and encouraging them to implement such missions with convergence.

Activities done under ICBP - Maharashtra

- ☉ Programme from 14th to 16th November, 2018 at Mumbai.
- ☉ Programme from 28th to 30th November, 2018 at Mumbai.



Participants during the programme on 14th November, 2018.



Participants during the programme on 28th November, 2018.

Participation

33 and 27 participants comprising Community Organisers (COs) of Maharashtra from NULM Mission, attended these programmes respectively.

Introduction

The Orientation Capsule under ICBP started with the introduction by Mrs. Neha Hardikar, Sr. Research Officer, RCUES, AIILSG, Mumbai. She welcomed the municipal functionaries from NULM sector and explained them the objective of the ICBP and the significance of convergence of existing standalone missions for effective implementation of project activities. She also conveyed the programme agenda to the participants.

Experts to Speak

The introduction was followed by the sessions. The subject experts were invited to address the participants.

1. Urban Sector Overview



Mr. T. C. Benjamin, IAS (Retd.), Chairman, State Expert Appraisal Committee, MoEF, GoI addressing the participants.

The first session was delivered by Mr. T. C. Benjamin, IAS (Retd.), Chairman, State Expert Appraisal Committee, Ministry of Environment & Forests (MoEF), GoI. He explained the issues and challenges in urban development, the importance of urban development and important acts viz

Bombay Municipal Corporation (BMC) Act, 1888, Bombay Provincial Municipal Corporation (BPMC) Act, 1949 governing urban development. He further explained the role of various ongoing missions and the connotations of preparation of service level improvement plan. He later emphasized on the need for convergence of various missions for its effective implementation.

2. Reforms in Urban Development



Mr. P. C. Pisolkar, former Municipal Chief Auditor, MCGM & Sr. faculty, AIILSG, Mumbai addressing the participants.

The second session was delivered by Mr. P. C. Pisolkar, former Municipal Chief Auditor, Municipal Corporation of Greater Mumbai (MCGM) & Sr. faculty, AIILSG, Mumbai. He spoke on urban reforms as suggested under AMRUT. He explained the challenges and need to address in the implementation of components of AMRUT and implementation of Service Level Improvement Plans (SLIPs) at ULB level to assess the gap in service delivery and effective solutions to overcome this city-wide gap. He later explained the financial outlay for achieving universal service delivery.

3. Improving Livelihood Opportunities under National Urban Livelihoods Mission (NULM)

The third session was presented by Mr. Nitin Survase, State Mission Manager, NULM, Directorate of Municipal Administration (DMA), Government of Maharashtra (GoM), Mumbai. He explained the six components of

NULM, which are - Social Mobilisation and Institution Development (SMID), Capacity Building and Training (CB&T), Employment through Skills and Training and Placement (EST&P), Self-Employment Programme (SEP), Support to Urban Street Vendor (SUSV) and Scheme for Shelter for Urban Homeless (SSUH).

The same topic was delivered by Mr. Prasad Raje Bhosale, State Mission Manager, NULM, DMA, Mumbai in the second training programme. He explained the pace of urbanization and the need for livelihood in an economically weaker section of the society. He explained the difference in Swarna Jayanti Shahari Rojgar Yojana (SJSRY) and NULM. He further explained strategies of livelihood. He cited several good practices in NULM.



Mr. Prasad Raje Bhosale, State Mission Manager, NULM, DMA, Mumbai addressing the participants.

4. Affordable Urban Housing under Pradhan Mantri Awas Yojana – Urban (PMAY-U)

The fourth session was delivered by Ms. Vaijayanti Mahabale, Dy. General Manager, Housing and Urban Development Corporation (HUDCO), Mumbai. She explained the key challenges in affordable housing focusing on urban poor including the slum dwellers. She explained the 4 verticals of PMAY (U) - Affordable Housing in Partnership (AHP), Beneficiary Led Individual House Construction (BLC), Credit Linked Subsidy Scheme (CLSS) and In Situ Slum Redevelopment (ISSR). She discussed the urbanization

and estimated shortage pertains to houses for several layers of people. She mentioned that, though Government of India (GoI) has given a boost to affordable housing for all, there are several issues in the development of affordable housing due to regulatory constraints, lack of clarity in building bye-laws etc. Lastly, she explained the role of Urban Local Bodies (ULBs) in effective implementation of PMAY scheme at the city



Ms. Vaijayanti Mahabale, Dy. General Manager, HUDCO, Mumbai addressing the participants.

5. Improving Urban Services - Water Supply and Sanitation under Atal Mission for Rejuvenation and Transformation (AMRUT)



Dr. Ajit Salvi, Executive Engineer (Sewerage), MCGM, Mumbai addressing the participants.

The fifth session was delivered by Dr. Ajit Salvi, Executive Engineer (Sewerage), MCGM, Mumbai. He explained the participants the importance of service delivery under AMRUT,

preparation of Service Level Improvement Plan (SLIP) and its parameters from infrastructure development to service delivery. He later explained Service Level Benchmarks (SLB) for accessing the existing service level gap. He concluded by citing national and international examples as a good practice in water supply and sanitation.

6. Physical Improvement of Urban Areas under Swachh Bharat Mission (SBM)

The sixth session was delivered by Dr. Milind Kulkarni, Director, Prachi Services, Mumbai. He explained the significance of Solid Waste Management under Swachh Bharat Mission (SBM). He further discussed on SWM service chain and sustainable sanitation. Later he emphasized on wet waste composting at household level by depicting a demo. Lastly, he portrayed innovations and best practices in waste management and ODF sustainability under SBM.



Dr. Milind Kulkarni, Director, Prachi Services, Mumbai addressing the participants.

Site Visits

On the third day of the programme, the municipal functionaries were taken for the first site visit to the Jai Ambe Community Area Level Federation (ALF) at Juhu Tara Road, Santacruz (West), Mumbai. This Self Help Group (SHG) is formed under Area Level Federation, NULM. The group of women engaged in income generating activities at household level. SHGs generates income through revolving funds.

A second site visit was conducted to observe the Sewerage Treatment Plant (STP) at Bandra Reclamation, Bandra (West), Mumbai. This STP covers Bandra sewerage zone, having an approximate population of 35 lakhs and catchment area of around 77 sq. km. This zone covers Dharavi, Kurla, Bandra and some parts of Western Suburbs. In this plant, sewer is collected and after preliminary treatment of fine screening and de-gritting, it is discharged into deep sea through marine outfall. For fine screening, 20 mm screens have been installed. For de-gritting, aerated grit chambers are provided. The installed capacity of the plant is 1910 MLD. There is effluent pumping station, which is operated at the time of high tides and for the cleansing operation of the outfall.

The entire process was explained by Mr. Abhijeet Desai, Jr. Engineer, Sewerage, STP, Bandra, Mumbai to the participants to understand the treatment facility and can be replicated in their own cities.



Participants during site visit at STP at Bandra, Mumbai.

Summing-up

These training programmes were concluded by Ms. Neha Hardikar, Sr. Research Officer, RCUES of AILSG, Mumbai after taking the feedback and Training Needs Assessment (TNA) from the participants and proposing a vote of thanks to them.

Testimonials



Training Programme on 'Solid Waste Management with a focus on Treatment of Wet Waste' 15th & 16th November, 2018, Ajmer, Rajasthan.

Mr. Deepak Patel, Senior Sanitary Inspector, Jamnagar Municipal Corporation, Gujarat.

“Excellent speakers, very insightful presentations with an outstanding opportunity to sharpen skills across different stages of waste processing. I enjoyed the group work through which, I was able to clear many doubts about composting process of wet waste. I would like to express my appreciation to RCUES team for organising this well planned training programme.”

Mr. Dhamji Lakha Basha, Chairman, Sanitation Committee, Dhoraji Municipality, Gujarat.

“All technical sessions were well organised with experienced speakers, especially Mr. Mahesh Pandya who covered a broad range of tips and advice, not just a focus on slides which will help us to understand how to minimise use of plastic in daily life. I will encourage my office staff for attending such type of training programme organised by RCUES, Mumbai in near future and gather useful knowledge in the area.”

Training Programme on 'Solid Waste Management with a focus on Treatment of Wet Waste' 28th & 29th November, 2018, Jamnagar, Gujarat.

Mr. R. B. Barade, Municipal Commissioner, Jamnagar Municipal Corporation, Gujarat.

“I am grateful to RCUES, Mumbai for conducting a wonderful training programme. The session on Swachh Survekshan was very informative. This knowledge is undoubtedly beneficial for us at the time of Survekshan in January 2019. ”

Mr. M. D. Rana, Executive Engineer, Jamnagar Municipal Corporation, Gujarat.

“The RCUES, AILSG, Mumbai has nicely conducted this training programme. The sessions were subject specific. The group work helped us in cross learning. I would be pleased to attend such programmes in near future. ”

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Since 1968 the RCUES, Mumbai is supported by the Ministry of Housing and Urban Affairs, Government of India.

Printed by All India Institute of Local Self-Government,
at Copytronics, Bandra (East) - 400 051.

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